

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

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APR 09 2001

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LOS ANGELES

**PCT**  
ENTERED

WRITTEN OPINION

(PCT Rule 66)

STATUS DB-LA

Date of Mailing  
(day/month/year)

04 APR 2001

Applicant's or agent's file reference

42390.P68742A

REPLY DUE

within TWO months  
from the above date of mailing

International application No.

PCT/US00/17664

International filing date (day/month/year)

26 JUNE 2000

Priority date (day/month/year)

08 JULY 1999

International Patent Classification (IPC) or both national classification and IPC  
IPC(7): G06F 9/46 and US Cl.: 709/102 712/245

Applicant

Intel Corporation

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

When? See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).~~

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also For an additional opportunity to submit amendments, see Rule 66.4. For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis. For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 08 NOVEMBER 2001

Name and mailing address of the IPEA/US  
Commissioner of Patents and Trademarks  
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LARRY DONAGHUE

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WRITTEN OPINION

International application No.

PCT/US00/17664

**I. Basis of the opinion**

1. With regard to the **elements** of the international application:\*

☒ the international application as originally filed

☒ the description:

pages 1-33 , as originally filed  
pages NONE , filed with the demand  
pages NONE , filed with the letter of \_\_\_\_\_

☒ the claims:

pages 34-44 , as originally filed  
pages NONE , as amended (together with any statement) under Article 19  
pages NONE , filed with the demand  
pages NONE , filed with the letter of \_\_\_\_\_

☒ the drawings:

pages 1-13 , as originally filed  
pages NONE , filed with the demand  
pages NONE , filed with the letter of \_\_\_\_\_

☒ the sequence listing part of the description:

pages NONE , as originally filed  
pages NONE , filed with the demand  
pages NONE , filed with the letter of \_\_\_\_\_

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.  
These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

- ☐ contained in the international application in printed form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

- ☒ the description, pages NONE  
☒ the claims, Nos. NONE  
☒ the drawings, sheets/fig NONE

5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed".

WRITTEN OPINION

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. statement			
Novelty (N)	Claims <u>31-43 and 50</u>		YES
	Claims <u>1-30 and 44-49</u>		NO
Inventive Step (IS)	Claims <u>31, and 42-43</u>		YES
	Claims <u>1-30, 32-41 and 44-50</u>		NO
Industrial Applicability (IA)	Claims <u>1-50</u>		YES
	Claims <u>NONE</u>		NO

2. citations and explanations

Claims 1-30 and 44-49 lack novelty under PCT Article 33(2) as being anticipated by Borkenhagen et al. ( WO 99/21082).

Borkenhagen et al. taught assigning priority o a first thread for a first duration, determining when the first duration has expired and assigning processing priority to a second thread (page 9, lines 5-25).

Borkenhagen et al. taught setting a priority level (page 19, lines 10-12), using priority bits (page 19, lines 10-12), setting the priority time period , loading a priority counter, keeping track of the duration and checking the elapsed time (page 37, claims 8-10).

Claims 32-41 and 50 lack an inventive step under PCT Article 33(3) as being obvious over the prior art as applied in the immediately preceding paragraph and further in view of Steere et al. ( A Feedback-driven proportion Allocator for Real-Rate Scheduling).

Borkenhagen et al. did not expressly detail the reprogramming of the duration period, based on the internal measurements of the system progress. Steere et al. taught the implementation and the benefit of based on the internal measurements of the system progress (pages 145 and 156).

Claims 31 and 42-43 the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest the increasing the first duration a predetermined amount on the conditions of lack of progress the last time the thread had processing priority and the processing priority having been switched and the predetermined restart period is set in response to a nuke or reset event .

----- NEW CITATIONS -----  
NONE

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**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

**TIME LIMIT:**

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.